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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
	:	Examiner: Unassigned
Timo ERIKSSON et al.)	
	:	Group Art Unit: Unassigned
Application No.: 10/018,804)	
	:	
Filed: December 21, 2001)	
	:	
For: METHOD AND APPARATUS FOR)	April 5, 2002
TREATING HIGH PRESSURE	:	
PARTICULATE MATERIAL)	

Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed PTO-1449 form. Copies of the listed documents are also enclosed.

Each item of information in this information disclosure statement was first cited in a communication from a foreign Patent Office in a counterpart foreign application. Specifically, these documents were cited in an International Search Report dated October 11, 2000, which was forwarded in a Communication dated October 18, 2000 (copies enclosed), from the International Searching Authority in a corresponding International patent application. Applicants also submit copies of the PCT Written Opinion dated April 19, 2001, and the Notification of Transmittal of International Preliminary Examination Report dated October 5, 2001.

As read by Applicants, European patent document 0 582 049 discloses a system for depressurizing and conveying particulate materials. (A translation of this document will be provided if so required by the Examiner.) In that document, the solids flow rate in the

pneumatic conveyer line (21) is not controlled by controlling the discharge rate of the carrier gas from the discharge reservoir (22), but by changing the cross section (20) of the choke device (11) and/or by changing the pressure in the material flow reservoir (3). The material is not conveyed to the discharge reservoir (22) essentially at the pressure of the material flow reservoir (3), but at a low pressure. The discharge reservoir (22) is maintained close to the atmospheric pressure, and the material is not depressurized in the discharge reservoir (22), but by the choke device (11) and the fixed choke (24).

As read by Applicants, because of its operating principle, the apparatus in the European document does not have two vessels, a collecting vessel and a receiving vessel, downstream of the conveyor line. Also, that document is not read to teach controlling the solids flow rate by controlling the discharge rate of the carrier gas or using the same vessel for collecting material and for reducing its pressure. Further, the device in that document includes maintenance requiring, and potentially breakable mechanical, devices to control the solids flow.

U.S. Patent No. 5,707,198 discloses a system for discharging particulate material from a high pressure vessel. In this patent, the quantity of material discharged to a lower positioned vessel is controlled by a material feeder, as recited in independent claim 1. In addition, the pressure of the material is not reduced in the intermediate vessel (21), but in the material columns formed in the upper and lower tube sections (18a, 18b). Thus, that patent does not refer to pneumatic conveying, and it does not teach using the same vessel for collecting material and for reducing its pressure. Also, that document uses a potentially breakable mechanical flow rate controlling device.

Japanese patent document 7-042910 discloses a system for pneumatic ash conveying, in which the material is first conveyed through an ash transporting tube (11), which includes a throttle (42) to a high pressure ash storing device (3), from where it is transferred to a separate hopper (6) in order to reduce the pressure to the atmospheric

pressure, and then the ashes are finally transferred to a normal pressure hopper (7).

Applicants submit that due to the throttle (42), the ash is not transferred all the way to the ash storing device (3), essentially at the pressure of the ash collecting device (23). Also, that document does not teach performing the function of the ash storing device (3) and the pressure reducing hopper (6) in the same vessel, or conveying material directly from the ash storing device (3) to the normal pressure hopper (7). Therefore, the system shown in that document is significantly complex and, due to its many valves, is prone to failure.

U.S. Patent No. 4,877,423 discloses a system for pneumatic conveying of dust, in which the dust is first conveyed to a precipitator (10) and a high pressure supply tank (15), from where it is transferred to a separate lock tank (16) in order to reduce the pressure of the dust, and then the dust is finally transferred to a silo (33) at atmospheric pressure. Applicants submit that this patent does not teach using the same vessel for controlling the pneumatic conveying, separating and discharging carrier gas, collecting particulate material, and reducing its pressure or conveying material directly from the supply tank (15) to the silo (33). Therefore, Applicants submit that this system is more complicated than the present invention, and is more prone to failure than the system according to the present invention.

Applicants are of the belief that the Japanese document discussed above represents the closest prior art. Applicants submit, however, that the solution presented in that document differs from the solution provided by the present invention in that, in the Japanese document, the material collected to the high pressure ash storing device (3) is not depressurized in that device, but is transferred from that device to a separate, conventional, pressure reducing hopper (6) for depressurization.


This Information Disclosure Statement is being filed before the issuance of a first Office Action on the merits. Therefore, no fee under 37 C.F.R. 1.97(c)(2) is believed due.

Nevertheless, the Commissioner may charge Deposit Account No. 06-1205, should any fee be due for filing this paper.

Applicants request that the above information be considered by the Examiner and that a copy of the enclosed PTO-1449 form be initialed and returned indicating that such information has been considered.

Applicants' undersigned attorney may be reached in our Washington D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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